

Abstract of the Disclosure

A system for cooling a structure exposed to solar radiation. The system includes a polymeric sheet covering one or more exterior surfaces of the structure. 5 A water dispensing means associated with the sheet provides a flow of water across the sheet to wet the sheet, allowing evaporative cooling to take place. The color and construction of the sheet also provide for 10 insulation against ambient heat and reflection of some solar energy. A sensor detecting an environmental condition, such as roof temperature or sheet wetting, may activate water flow by actuating a valve.